

General Description: A portable transistor radio for use on Long, Medium and Short waves. A socket for 8 ohm earphone is fitted. Waveband coverage: L.W.: 857-2000m; M.W.: 187-566m; S.W.: 5.95-18MHz.

Batteries: 6 volts (4×1.5 volts, LPU11 or equivalent).

Loudspeaker: 8 ohms impedance.

Dismantling

General: On unclipping and raising the back of the case, access is obtained to the batteries and to the component side of the printed circuit board. All cores and trimmers are accessible, without further dismantling, for alignment purposes.

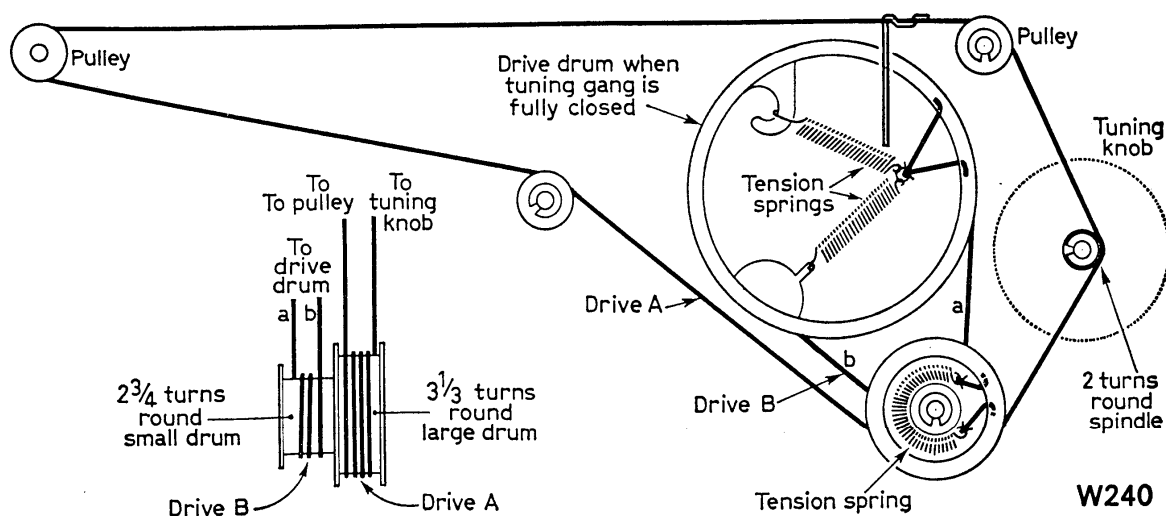
Dismantling Chassis Assembly: Remove all batteries. Remove Phillips-head screws as follows: one from the single battery well, two from the main battery well, one from the volume control bracket and one (with its washer) from the top left-hand corner of the printed circuit board.

The complete chassis assembly, including cord drive system, can then be removed to the extent of the leads to the loudspeaker, the telescopic aerial and the battery negative spring.

Alignment Procedures

General: Access to all cores, trimmers and coils is obtained on unclipping and folding up the back flap of the casing.

Connect output meter (8Ω impedance) across the loudspeaker (it may be conveniently plugged into the earphone socket). For I.F. and LW/MW R.F. alignment it is recommended that the signal generator is connected to a coupling loop, placed near to, and coaxial with, the ferrite rod aerial. The output

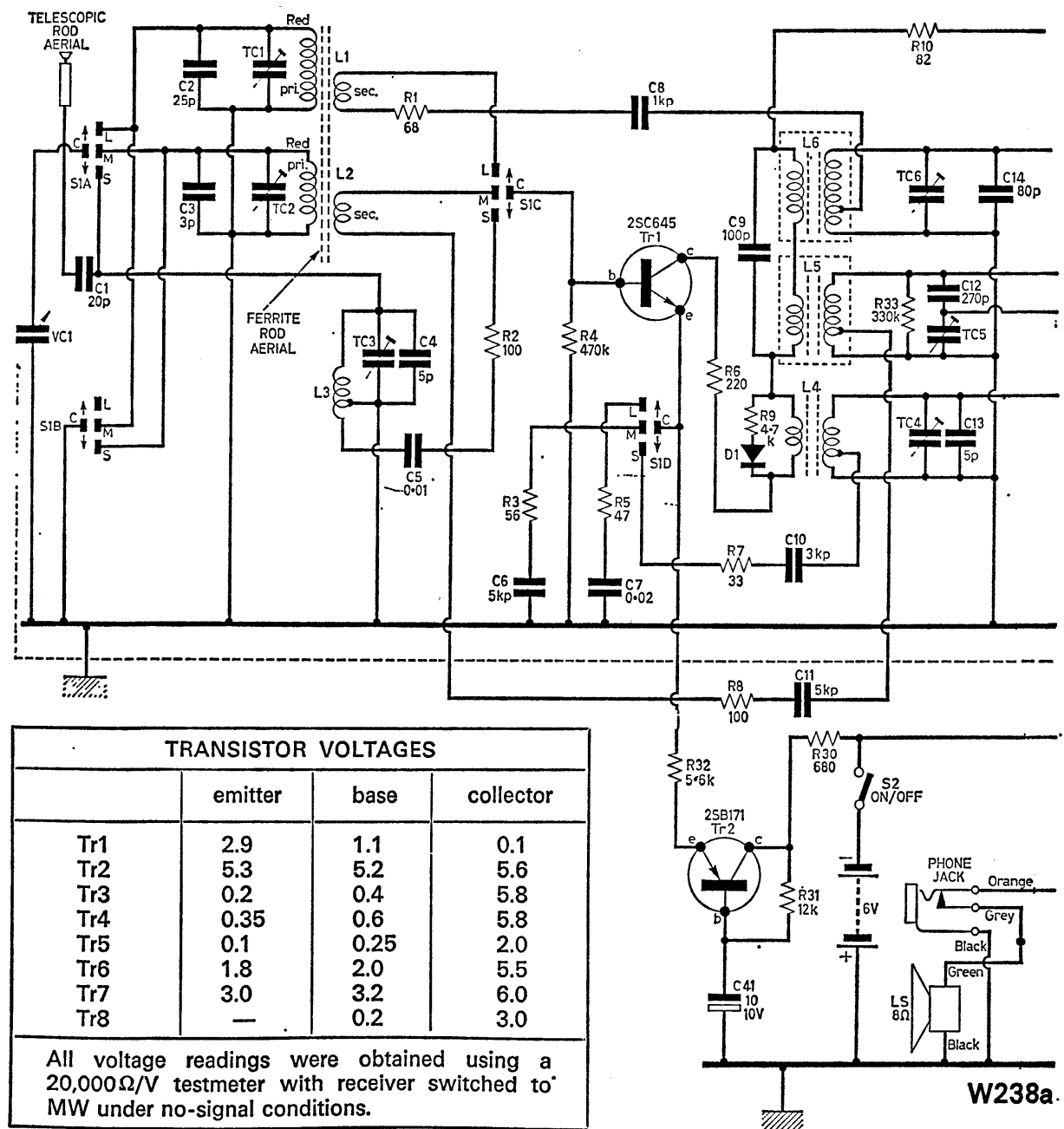


(W240) DRIVE CORD—MODEL 333

from the signal generator should be maintained at a low level to avoid A.G.C. action, which would lead to misleading readings on the output meter, and should be progressively reduced as the tuned circuits come into alignment.

Before commencing alignment, check that the tuning pointer is correctly set (i.e., that the extreme ends of travel are equal at each end of the scale bands, approximately $\frac{3}{16}$ in.)

I.F. Alignment: Turn volume control to maximum (i.e., fully anticlockwise) and switch receiver to MW. Tune receiver to low frequency end of the band. Inject into loop a signal of 470kHz and trim the cores of IFT₃, IFT₂ and IFT₁, in that sequence, for maximum output. Repeat for optimum results.



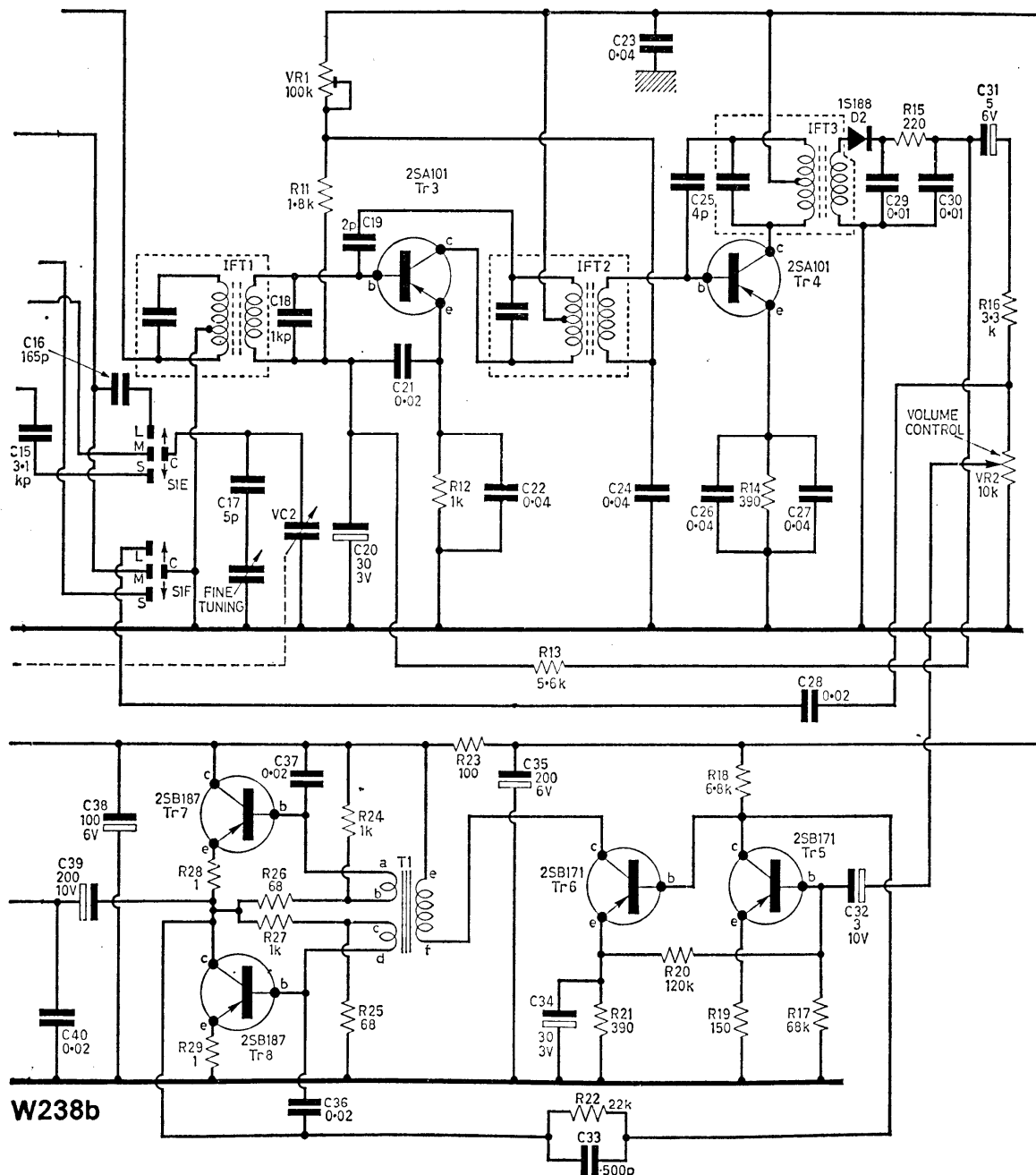
(W238a) CIRCUIT DIAGRAM—MODEL 333 (Part)

R.F. Alignment: Medium Wave: With receiver still switched to MW, tune to the 500m scale mark, inject a signal of 600kHz and trim oscillator coil L5 for maximum output. Return receiver to the 200m scale mark, inject a signal of 1,500kHz and adjust trimmer TC5 for maximum output.

Retune receiver to the 500m scale mark, inject signal of 600kHz and adjust aerial coil L2, by sliding it along the ferrite rod, for maximum output. Retune receiver to the 200m scale mark, inject a signal of 1,500kHz and adjust trimmer TC2 for maximum output.

It may be necessary to repeat these operations for optimum results.

R.F. Alignment: Long Wave: Switch receiver to LW. Tune receiver to 1,900m (190 on scale). Inject a signal of 158kHz and adjust oscillator coil L6



(W238b) CIRCUIT DIAGRAM—MODEL 333 (Continued)

RADIO SERVICING

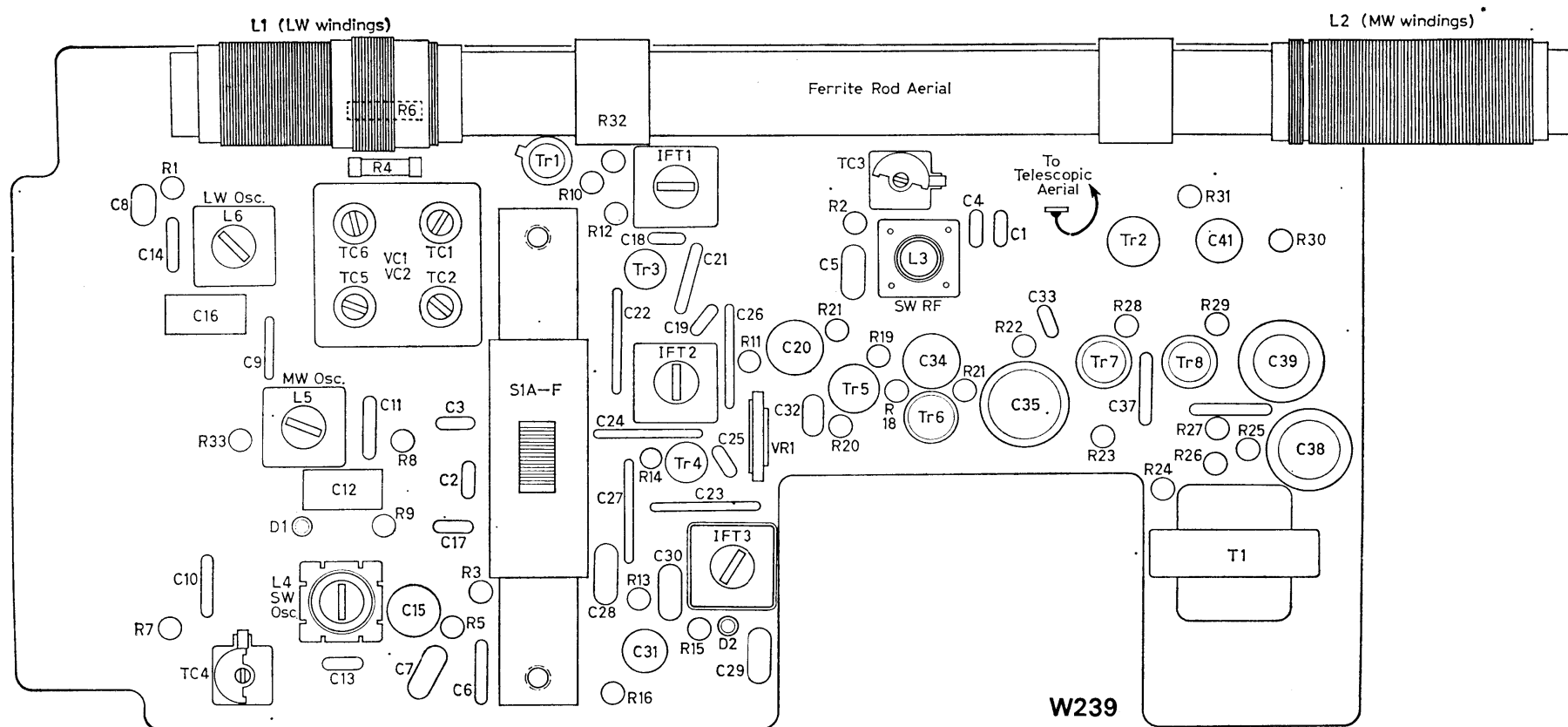
for maximum output. Retune receiver to 900m (90 on scale), inject a signal of 333 kHz and adjust trimmer TC6 for maximum output.

Retune receiver to 1,900m, inject a signal of 158 kHz and adjust aerial coil L₁, by sliding it along the ferrite rod, for maximum output.

Retune receiver to 900m, inject a signal of 333 kHz and adjust trimmer TC₁ for maximum output.

R.F. Alignment: Short Wave: Transfer signal generator to the telescopic aerial. Switch receiver to SW. Tune receiver to the 6MHz scale mark, inject a signal of 6MHz and adjust oscillator coil L₄ for maximum output. Retune receiver to the 18MHz mark, inject a signal of 18MHz and adjust TC₄ and then TC₃ for maximum output.

When alignment has been completed, reseal all cores, trimmers, and aerial coils.



(W239) COMPONENT LAYOUT—MODEL 333